

## Abstract

The present invention comprises the identification, characterization and sequencing of a gene within the *V. anguillarum* genome, the *mugA* gene, a live, attenuated strain of *V. anguillarum* which comprises a mutated *mugA* gene, methods of making the strain, vaccines comprising the strain and methods of making such vaccines and administering the vaccines to animals. The invention further comprises vaccines comprised of proteins encoded by the *mugA* gene, to methods of making such vaccines and administering the vaccines to animals, to vectors comprised of the attenuated strain of *V. anguillarum* and additional immunizing materials, methods of making the vectors and methods of administering the vectors to animals. Also disclosed are probes, passive vaccines and monoclonal antibodies for the detection and prevention of vibriosis.